REMARKS/ARGUMENTS

Claims 1 and 3-8 are pending in the present application. Claims 1, 4, and 7 stand rejected under 35 U.S.C. §102(e) over United States Patent No. 6,595,211 to Weiler et al. Claims 3, 5, 6, and 8 are indicated to be allowable over the prior art. No amendments to the claims are presented in response. Reconsideration is respectfully requested.

First, Applicants gratefully acknowledge the indicated allowability of claims 3, 5, 6, and 8.

Claims 1, 4, and 7 stand rejected under 35 U.S.C. §102(e) over United States Patent No. 6,595,211 to Weiler et al. This rejection is respectfully traversed.

Weiler teaches a method of detecting regional variations in oxygen uptake from the lungs of an air-breathing subject. A gaseous hyperpolarized contrast agent (like 3He or 129Xe) is administered into the lungs of the subject. This procedure is described in detail in col. 7, line 8-47: the contrast agent is inspired. In the present invention, conversely, the contrast agent is administered into the vasculature.

Applicants respectfully submt that the Examiner's statement that the hyperpolarized gases Weiler uses as contrast agents are T2 blood pool agents is incorrect. Per definition (in the art but also in instant application on page 1, line 22-23 of the PCT publication WO 00/19227) a blood pool agent is an agent which is retained in the blood plasma, meaning that it stays there for a while, either because it is comprised of rather large particles (like the particulate agents mentioned on page 10, line 35 to page 11, line 6 of WO 00/19227) which cannot escape from the blood vessels or because of its chemical nature, i.e. it contains moieties which bind to proteins in the blood and the agent is thereby retained in the blood (see page 10, lines 30-35 of WO 00/19227). Gases – like oxygen or helium - which are inhaled travel through the lungs into the alveoli. These small sacks in the lungs are tightly covered with pulmonary vessels and here the inhaled gases cross the gas-permeable

membranes of the alveoli and became dissolved in the blood. The blood transports gases like oxygen to the cells where oxygen is needed for metabolic processes in the cells. As gases are not retained in the blood they are not blood pool agents as recited by claim 1 of the present invention.

Moreover, the present invention detects MR signals from the vasculature where the contrast agent distributes. Weiler's contrast agent, contrarily, is in the lungs - it is a gaseous contrast agent. As a result, Weiler detects MR signals from the lungs, not from the vasculature. As Weiler does not detect signals from the vasculature, it is not possible to manipulate these signals in such a way that an indication of the partial pressure of oxygen in part of the vasculature is generated. Therefore, Weiler determinates the partial pressure of oxygen in the lungs (see col. 5, lines 27-31) and not in the vasculature.

Lastly, Weiler is completely silent about the determination of R1 of blood in an artery and the determination of hematocrit therefrom.

In order to anticipate under 35 U.S.C. §102, a prior art reference must teach each and every limitation of a claimed invention. As demonstrated hereinabove, Weiler fails to disclose each and every limitation of the presentation. Therefore, Applicants respectfully submit that the present invention is patentably distinct from Weiler. Reconsideration and withdrawal of the rejection are respectfully requested.

In view of the foregoing remarks, Applicants respectfully submit that the present application, including claims 1 and 3-8, is in condition for allowance. Favorable action thereon is respectfully requested.

Any questions with respect to this matter may be directed to Applicants' undersigned counsel at the telephone number below.

Respectfully submitted,

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